CLAIMS

What is claimed is:

1.   A routing system operable to link a mobile platform to the Internet,
comprising:

a ground based communications link manager communicatively
linkable to the mobile platform;

at least one ground based prefix server in operable communication
with the communications link manager;

an initial destination address assignable to the mobile platform; and

a prefix server program operable to communicate the initial
destination address of the mobile platform to the communications link manager
and to the Internet.

2.   The system of Claim 1, comprising a prefix number selectable from
a plurality of prefix numbers, wherein the initial destination address of the mobile
platform is assignable from the prefix number.

3.   The system of Claim 1, wherein the prefix server and the
communications link manager are in operable communication with the Internet
using a global border gateway protocol.

4.   The system of Claim 1, wherein the prefix server and the ground
based communications manager are in operable communication with the Internet
using at least one of a plurality of Internet service providers.

5.   The system of Claim 1, wherein a new destination address is
communicable to the Internet using the prefix server during a travel segment of
the mobile platform.

6.   The system of Claim 5, wherein the new destination address is
operatively communicable to the Internet using a second communications link
manager.

7.   A method for operating a mobile platform communications system prefix server, comprising:

selecting a prefix number from a plurality of prefix numbers;

linking the prefix number to a mobile platform identification number;

5   linking the prefix number to a mobile platform destination address; and

signaling to at least one Internet service provider the location of the mobile platform destination address.

10   8.   The method of Claim 7, comprising:

adding data transfer routes between the mobile platform destination address and the Internet service provider;

confirming if a two-way communications path is open between a mobile platform and a ground communications link manager; and

15   withdrawing the data transfer routes when the two-way communications path is broken.

9.   The method of Claim 7, comprising positioning the prefix server as a ground based unit.

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10.   The method of Claim 7, comprising injecting a plurality of network layer reachability information into an internal border gateway protocol network.

11.   The method of Claim 7, comprising notifying a plurality of route 25   servers of the prefix number.

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12.   A method for maintaining communications contact between a mobile platform and the Internet during a travel segment of the mobile platform using at least one ground based communications link manager, the method comprising:

5   creating at least one ground based prefix server operable to communicatively link the mobile platform and the communications link manager;

programming the prefix server to operatively select a prefix number for the mobile platform from a plurality of prefix numbers;

assigning the prefix number to the mobile platform for the travel
10   segment; and

signaling via the prefix server a destination address of the mobile platform using the prefix number communicated via the communications link manager.

15   13.   The method of Claim 12, comprising:

selecting a new prefix number upon initiation of a new travel segment of the mobile platform;

creating a new destination address using the prefix server; and

signaling the new destination address using the prefix server during
20   the new travel segment of the mobile platform to operatively maintain communication between the mobile platform and the Internet.

14.   The method of Claim 12, comprising:

establishing a two-way communication path between the mobile
25   platform and the communications link manager; and

adding a plurality of route paths using the prefix server after the two-way communication is established.

15.   The method of Claim 14, comprising withdrawing the route paths
30   when the two-way communication ends.

16.   The method of Claim 12, comprising mapping a unique aircraft identification number to the assigned prefix number using the prefix server.

17. The method of Claim 12, comprising injecting a plurality of network layer reachability information using the prefix server.

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18. The method of Claim 12, comprising notifying a plurality of Internet route servers of the selected prefix number using the prefix server.

19. The method of Claim 12, comprising initially allocating the plurality of prefix numbers to a global pool of prefix numbers.

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20. The method of Claim 19, comprising:

creating a local pool operable to contain a first portion of the plurality of prefix numbers; and

assigning the local pool to an autonomous system in operable

15 communication with the Internet.

21. The method of Claim 20, comprising programming the prefix server to initially select the prefix number from the local pool.

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22. The method of Claim 21, comprising programming the prefix server to operatively select the prefix number from the global pool if the local pool is empty.

23. The method of Claim 20, comprising programming the prefix server

25 to add the prefix number to the local pool upon completion of the travel segment.

24. The method of Claim 23, comprising:

programming the prefix server to add the prefix number to the global pool only if the local pool is in a full condition; and

30 withdrawing a plurality of route paths operably forwarded by the prefix server only if the prefix number is added to the global pool.

25.   A method for maintaining communications contact between a
mobile platform and the Internet during a travel segment of the mobile platform
using at least one ground based communications link manager, the method
comprising:

5   creating at least one ground based prefix server operable to
communicatively link the mobile platform and the communications link manager;

programming the prefix server to operatively select a prefix number
for the mobile platform from a plurality of prefix numbers for the travel segment of
the mobile platform;

10   submitting a mobile platform request for the prefix number at the
initiation of the travel segment;

assigning the prefix number to a mobile platform identification
number; and

operating the prefix server to signal a destination address of the
15   mobile platform using the prefix number communicated via the communications
link manager.

26.   The method of Claim 25, comprising:

establishing a two-way communication path between the mobile
20   platform and the communications link manager; and

adding a first plurality of Internet route paths using the prefix server
after the two-way communication is established.

27.   The method of Claim 26, comprising withdrawing the first plurality of
25   route paths when the two-way communication ends.

28.   The method of Claim 27, comprising:

selecting a new prefix number during the travel segment of the
mobile platform when the two-way communication ends; and

30   creating a new destination address from the new prefix number
using the prefix server.

29.   The method of Claim 28, comprising:

establishing a new two-way communication path between the mobile platform and the communications link manager;

signaling the new destination address using the prefix server during a new travel segment of the mobile platform to operatively maintain communication between the mobile platform and the Internet; and

adding a second plurality of route paths using the prefix server.

30.   The method of Claim 25, comprising notifying a plurality of Internet route servers of the selected prefix number using the prefix server.

31.   The method of Claim 25, comprising programming the prefix server to operatively notify at least one other prefix server of the plurality of prefix servers that a mapping of a mobile platform identification number to a route is invalid at an end of the travel segment.

32.   The method of Claim 25, comprising linking a mobile autonomous system number to the prefix number.

33.   The method of Claim 32, comprising modifying a network layer reachability information message using the prefix server.

34.   The method of Claim 32, comprising aggregating a plurality of route paths using the prefix server.

35.   The method of Claim 32, comprising inserting a single network layer reachability information message for a plurality of route paths.